

# Open Research Online

---

The Open University's repository of research publications and other research outputs

## The potential of mobile phones to transform teacher professional development

### Conference or Workshop Item

#### How to cite:

Walsh, Christopher; Woodward, Clare; Solly, Michael and Shrestha, Prithvi (2014). The potential of mobile phones to transform teacher professional development. In: 28th Annual Conference Asian Association of Open Universities: Advancing open and distance learning: research and practices, The Open University of Hong Kong, pp. 641–651.

For guidance on citations see [FAQs](#).

© 2014 The Authors

Version: Version of Record

---

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online's data [policy](#) on reuse of materials please consult the policies page.

---

[oro.open.ac.uk](http://oro.open.ac.uk)

# 28th Annual Conference Asian Association of Open Universities



**28–31 October 2014**

The Open University of Hong Kong • Hong Kong SAR, China

## Proceedings

Edited by

Danny Wong, K C Li and K S Yuen

Organizers:



Sponsors:



Editors:

Danny Wong, K C Li and K S Yuen  
The Open University of Hong Kong, Hong Kong

The papers in the e-Proceedings are in the form in which they have been received from the authors. They have not been edited. Some titles may be slightly different from the edited titles of the abstracts.

Copyright © individual authors, 2014

All rights reserved. No part of this material may be reproduced in any form or by any means without permission in writing from the individual copyright holder.

ISBN 978-988-8238-06-4

Compiled and published by The Open University of Hong Kong,  
Hong Kong SAR, China

## Preface

We are pleased to publish the *Proceedings of the 28th Annual Conference of the Asian Association of Open Universities* (AAOU 2014).

The theme of the Conference, *Advancing Open and Distance Learning: Research and Practices*, highlights the common goal of the Asian Association of Open Universities (AAOU) and its member institutions, which is to facilitate and achieve advancements in open and distance education (ODE) on the solid basis of research findings and through sharing best practices. You will find that the papers of these proceedings serve this goal very well. They report research and share practices under at least one of the following sub-themes:

- Multi-mode education
- Student learning support
- Development of instructional materials
- Staff development
- Studies on OCW and MOOCs
- Institutional advancement and innovations
- Development and adoption of OER
- Blended learning
- Planning and management
- Collaboration between institutions
- Use of ICT in course delivery
- Quality assurance
- Assessment and evaluation
- Funding and infrastructure for research and development
- Nurturing an institutional research culture

From more than 300 submissions, the Conference accepted only 107 full papers through a stringent review process by the International Programme Committee. The papers are representative of the latest studies by administrators, academics and researchers in the field and provide a good overview of the most recent developments in ODE.

We would like to thank all authors for their contributions. We are also grateful to members of the AAOU 2014 Academic Programme Sub-committee and the Secretariat for their diligence in securing a

large number of paper submissions from a broad range of countries and completing the review of these many submissions within a tight schedule. We extend our thanks to staff of the Educational Technology and Publishing Unit of the Open University of Hong Kong (OUHK) for their design, administration and production support for these proceedings. We are also obliged to the dedicated staff of the OUHK University Research Centre for their untiring and efficient logistical support in handling the papers. Finally, we would like to express our sincere gratitude to the Commonwealth of Learning (COL) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) for their sponsorship support to many delegates to attend the Conference.

Editors

Danny Wong, K C Li and K S Yuen

October 2014

# Contents

## Paper Presentations

### Multi-mode education

<b>Psychological health education based on mobile learning</b>	<b>1</b>
Shaoling Ye, Jiangying Yu, Dean Litao Zhu and Peiran Chen	
<b>Web-based cooperative learning in distance education</b>	<b>5</b>
Dean Litao Zhu, Ruisong Wu and Shaoling Ye	
<b>Open distance learning and knowledge management</b>	<b>10</b>
Teoh Ping Chow	
<b>Development and innovation in distance education approaches in rural China</b>	<b>21</b>
Hui Chen	
<b>The use of radio media in farmers' education and training</b>	<b>29</b>
Tian Jing	
<b>Revamping the learning management system to provide a successful learning experience</b>	<b>40</b>
Hui Thian, Teo and Mansor, Fadzil	
<b>Problems of digital libraries in the age of electronic publications</b>	<b>48</b>
Hadi Sharif Moghaddam and Ghasem Ali Ehsanian	
<b>Ubiquitous learning theory: A conceptual model of open English education</b>	<b>56</b>
Ke Chen	
<b>Combining virtual simulation experiments with remote control experiments in distance education</b>	<b>64</b>
Xiaofang Ruan	
<b>Reflections on blended learning: A case study at the Open University of Hong Kong</b>	<b>72</b>
Wing Bo Tso	
<b>The contribution of open and distance learning to the development of society in Vietnam: A case study from Hanoi Open University</b>	<b>82</b>
Le Van Thanh and Hoang Tuyet Minh	
<b>Evaluation of implementing virtual education as an adjunct to the in-service training courses of physical education teachers</b>	<b>90</b>
Abolfazl Farahani	

### Student learning support

<b>Developing student learning support for graduate employability through entrepreneurial clinics</b>	<b>98</b>
Ratna Marta Dhewi, Yoyoh K, Boedhi Oetoyo, Enang Rusyana and Dem Vi Sara	
<b>An exit survey as baseline data for improving the quality of student learning support</b>	<b>106</b>
Kristanti Ambar Puspitasari, Benny Agus Pribadi and Sudirah	

<b>Enhancing the effectiveness of online tutorials for economics education's final assignment to improve student mastery</b>	<b>116</b>
Suripto, Sri Sumiyati and Durri Andriani	
<b>A study on non-completing students of the Certificate in Pre-school Education programme at the Open University of Sri Lanka</b>	<b>126</b>
A Ariyaratne, D M W Munasinghe, P Seneviratne, P L N Randima Rajapaksha and D D I Dediwala	
<b>The impact of vicarious failure as a pedagogical strategy in modelling the behaviour of adult learners in open and distance learning</b>	<b>135</b>
Nantha Kumar Subramaniam and Maheswari Kandasamy	
<b>An analysis of online learning behaviour from a tutor perspectives: Reflections on interactive teaching and learning in the big data era</b>	<b>146</b>
Yanhui Han, Shunping Wei and Shaogang Zhang	
<b>'Eeny, Meeny, Miny, Moe' — open educational resources selection for English language skills proficiency at the University of the South Pacific</b>	<b>160</b>
Neelam Narayan and Alanieta Lesuma-Fatiaki	
<b>Learning support service system construction in an agro-ecological engineering course at Jiangsu Open University, and its implications</b>	<b>169</b>
Ting Cheng, Chenghui Han, Rong Tang and Zhaoqin Huang	
<b>The influence of internal and external factors on student participation in online tutorials at Universitas Terbuka</b>	<b>177</b>
Meilani, Any, Kuswanti, Eko and Pujiwati, Ami	
<b>Factors affecting adult learners' persistence in e-learning programmes in Ho Chi Minh City, Vietnam — A mediation analysis of learners' motivation</b>	<b>184</b>
Tu Tran Hoang Cam and Khuong Mai Ngoc	
<b>Student participation in academic activities</b>	<b>196</b>
Sri Kurniati, Durri Andriani and Moh. Muzammil	
<b>Students' satisfaction and perceived attainment in the use of an online discussion forum: A follow-up study in the OUHK</b>	<b>203</b>
Henry M F Choi and Eva Y M Tsang	
<b>The perceived effectiveness of weekly announcements in the provision of learning support to sociology students</b>	<b>215</b>
Sadia jabeen	
<b>Virtual collaborative learning using Wiki for adult ODL learners: The case of Wawasan Open University</b>	<b>221</b>
Ean-Teng Khor	
<b>Mobile applications at a mega university: Anadolu University campus app</b>	<b>231</b>
Ozgur Yilmazel and Erk Ekin	
<b>Moodle quizzes in the learning environment</b>	<b>240</b>
Prakash Arumugam	
<b>Student satisfaction and persistence: Imperative features for retention in open and distance learning</b>	<b>250</b>
Maximus Gorky Sembiring	

<b>Factors affecting the drop-out rate on the Engineering degree programme at the Open University of Sri Lanka</b>	<b>259</b>
--	------------

Janaka Liyanagama

<b>Student utilization of UT-Online</b>	<b>271</b>
---	------------

Sugilar Jiwapraja and Purwaningdyah Murti Wahyuni

<b>Course instructors taking responsibility against the background of MOOCs: From the perspective of responsibilities to students</b>	<b>280</b>
---	------------

Dai Zhang

## Development of instructional materials

<b>Field trial analysis of printed agricultural extension administration learning materials</b>	<b>289</b>
---	------------

Endang Indrawati, Idha Farida, Diarsi Eka Yani and Nurhasanah

<b>The design of microlectures based on a mobile learning environment in an electrical commerce course</b>	<b>300</b>
--	------------

Fang Liu and Xiaoyuan Xu

<b>Online curriculum mapping as a learning analytic tool for collaborative distributed programme and curriculum development: Implications for open and distance learning</b>	<b>308</b>
--	------------

Roel Cantada

<b>Online learning gamification for a course on lawyer affairs</b>	<b>324</b>
--	------------

Hui Lin and Zhishi Zhang

<b>Development of a hybrid system to enhance borderless learning: Challenges and opportunities for the underserved</b>	<b>331</b>
--	------------

Kyaw Ahr Kar Nyunt, Khar Thoe Ng, Baharulnizam Baharum and Annamalai Chockalingam

<b>Using Web 2.0 technologies with special needs students in distance education</b>	<b>345</b>
---	------------

Zahid Majeed

<b>The development of an online course on leadership development and change management for nurse executives in ASEAN countries</b>	<b>354</b>
--	------------

Siritarungsri Boontip, Noimuenwai Premruetai, Cheevakasemsook Aree Kaewsarn and Puttapitukpol Somjai

<b>A cognitive apprenticeship approach to teaching organic chemistry online: Challenges and opportunities</b>	<b>367</b>
---	------------

Charisse T Reyes, Rubielita F Gata and Evelyn B Rodriguez

<b>Quiz model for a distance education textbook</b>	<b>373</b>
---	------------

Hasanuddin and Suhartono

## Staff development

<b>Teachers' team-building from the perspective of personalized education in China's open universities</b>	<b>382</b>
--	------------

Chen Ying and Chen Ke

<b>The impact of the integration of OER in teacher education programmes at the Open University of Sri Lanka</b>	<b>389</b>
---	------------

Shironica Karunanayaka and Som Naidu



<b>Training needs assessment for teaching staff in open universities and dual-mode higher education institutions in Asia</b>	<b>401</b>
Ashok Gaba and Sanjaya Mishra	
<b>Entrance level challenges of ODL faculty members</b>	<b>412</b>
Rahila Hanif, Aisha Ismail and Sadaf Chouhdary	
<b>Explaining the work of the ODL faculty through a job characteristic model (JCM)</b>	<b>420</b>
Sadaf Chouhdary, Mehwish Farooqui, Aisha Ismail and Rahila Hanif	
<b>An explicit overview on the professional development approach in Nepal's ODL policy</b>	<b>427</b>
Bhandari Ghimire Sunita and Bhandari Prakash	

## **Studies on OCW and MOOCs**

<b>MOOCsification: Motivations and deterrents</b>	<b>440</b>
Billy T M Wong, Kam Cheong Li, Sam Pang and Helen Lam	
<b>MODeLing: Reinventing MOOC through a learner-centred approach</b>	<b>451</b>
Melinda dela Pena Bandalaria	
<b>The Open University of Japan's MOOC platform: Features and outcomes</b>	<b>459</b>
Tsuneo Yamada, Yoichi Okabe, Masumi Hori and Seishi Ono	
<b>Research and analysis of a mobile phone library based on mobile learning</b>	<b>470</b>
Yang Xiaohuan and Yang Lei	
<b>Profiling the characteristics of MOOC platforms</b>	<b>476</b>
Kam Cheong Li, Billy T M Wong, Esther W S Chok and Terry Lee	
<b>Integration of the organizational communication mechanisms of MOOC and ODL institutions</b>	<b>486</b>
Sicong You	
<b>Embarking on MOOCs: The OUM experience</b>	<b>493</b>
Mansor Fadzil, Tai Kwan Woo, Mazlan Zulkifly, Fathinirna Mohd Arshad and Nur Hisyam Mohd Said	

## **Institutional advancement and innovations**

<b>Use of a digital printing system for improving the quality of examinations at Universitas Terbuka</b>	<b>504</b>
Irma Adnan, Teguh Prakoso, Amalia Sapriati and Aminudin Zuhairi	
<b>A study on establishing effective vertical connections between secondary and higher vocational education based on a credit bank framework</b>	<b>511</b>
Liu Fang and Liu Jing	
<b>KNOU smart learning: Beyond the future KNOU learning environment</b>	<b>517</b>
Kwang Sik Chung, Yeon Sin Kim, Chung Hun Lee and Sang Im Jung	
<b>A managerial evaluation of face-to-face tutorials in a distance learning primary education programme</b>	<b>526</b>
Lusi Rachmiazasi Masduki, Binti Muflikah and Purwaningdyah Murti Wahyuni	
<b>Teaching accounting in the distance learning mode and on-campus mode: A comparative study at Wawasan Open University</b>	<b>536</b>
Choo Hong Loo	

<b>Innovative evaluation methodology at SCDL</b>	<b>545</b>
Swati Mujumdar	
<b>Converting traditional distance learning into fully online learning: A case study of practice at the Open University of Jiangsu</b>	<b>552</b>
Xiangyang Zhang and Shu-chiu Hung	
<b>Distance teacher education for a better school Curriculum 2013</b>	<b>560</b>
Udin S Winataputra and Riza Alrakhman	
<b>The interplay between gender, learning approaches and academic performance in Chinese sub-degree and degree students</b>	<b>576</b>
Chi Nam Andy Kan and Yiu Kong Chan	
<b>Reconceptualizing analytics in education: A quest for a common ground</b>	<b>589</b>
Kam Cheong Li, Beryl Y Y Wong and Esther W S Chok	
<b>Instructional technology from the perspective of cultural historical activity theory: A case study of a video-conferencing system in an open and distance university</b>	<b>600</b>
Park, Yangjoo and Yeon, Eun Kyung	
<b>Prototyping a conceptual model for real-time online facilitation of mathematics</b>	<b>609</b>
Mansor Fadzil and TickMeng Lim	
<b>Development and adoption of OER</b>	
<b>Development and validation of a scale to measure faculty attitudes towards open educational resources</b>	<b>618</b>
Meenu Sharma, Sanjaya Mishra and Atul Thakur	
<b>Blessing or curse? Open educational resources accessibility: The University of the South Pacific experience</b>	<b>625</b>
Alanieta Lesuma-Fatiaki and Neelam Narayan	
<b>The potential of mobile phones to transform teacher professional development</b>	<b>641</b>
Christopher S Walsh, Clare Woodward, Mike Solly and Prithvi Shrestha	
<b>Learner autonomy through the adoption of open educational resources(OER): Using social network services and multi-media e-textbooks</b>	<b>652</b>
Masumi Hori, Seishi Ono, Shinzo Kobayashi, Kazutsuna Yamaji, Toshihiro Kita and Tsuneo Yamada	
<b>Open educational resources in distance learning: Policies and initiatives in Indian universities</b>	<b>663</b>
Sujata Santosh and Santosh Panda	
<b>Blended learning</b>	
<b>Transformation of conventional DL courses into BL courses: Use of multimedia and ID strategies</b>	<b>670</b>
Eva Y M Tsang and Henry M F Choi	
<b>Research on the implementation of the strategy of blended learning in open and distance learning</b>	<b>685</b>
Zhang Ning	
<b>The development of blended learning support for an introductory calculus course at a distance learning institution</b>	<b>690</b>
Asmara Iriani Tarigan, Sitta Alief and Dina Mustafa	

<b>The use of web-based communication tools for enhancing collaborative learning experience</b>	<b>701</b>
Francis Yue	
<b>The design of economical blended mobile learning with SMS</b>	<b>716</b>
Kwang Sik Chung, Vincent Chung Sheng Hung and Teoh Ping Chow	
<b>An empirical study of flipped classrooms in an open university: A case study on translation theory and practice</b>	<b>725</b>
Xiaoyang Shu	
<b>The rise and rise of blended learning</b>	<b>735</b>
Robert Fox	
<b>The integration of micro-lectures into the blended learning discourse in tertiary education</b>	<b>742</b>
Jie Xu and Xiangyang Zhang	

### Planning and management

<b>Leading and managing change in education: Putting transformational leadership into practice</b>	<b>750</b>
Linda Yin King Lee and Joseph Kok Long Lee	
<b>Strategic development for advancing ODL institutions: A SWOT analysis from the Open University of China</b>	<b>759</b>
Wei Li, Wenjian Yao and Na Chen	
<b>The knowledge creation process in developing academic products and the service system in Universitas Terbuka</b>	<b>779</b>
Purwanto, Agus Joko and Marisa	
<b>Open education initiatives and KM readiness in an ODeL institution</b>	<b>789</b>
Melinda F Lumanta and Alvie Simonette Q Alip	
<b>A mobile course rescheduling system with WeChat in Jiangsu Open University</b>	<b>797</b>
Shen Jun	
<b>The devepoment of a hybrid learning system model in an academic training programme on instructional materials research</b>	<b>805</b>
Trini Prastati, Benny A Pribadi and Sandra Sukmaning Aji	
<b>Survey of external stakeholders' image of STOU</b>	<b>813</b>
Paiboon Kachentaraphan, Orasa Pankhao and Monwipa Wongrujira	

### Use of ICT in course delivery

<b>Expanding the frontiers of engineering education in open and distance learning by an online laboratory platform</b>	<b>825</b>
W A Rasika Nandana, W R de Mel and H DNS Priyankara	
<b>Analysis and application of social software in online interactive teaching</b>	<b>838</b>
Xuan Zhang	
<b>The impact of online tutorials on students' ability to compose journalistic writing</b>	<b>847</b>
Irsanti Widuri Asih	
<b>A social constructivist approach for an online civic education tutorial</b>	<b>862</b>
Made Yudhi Setiani	

<b>A survey on the MOOC English course at University Terbuka</b>	<b>871</b>
Johanna B S Pantow	
<b>Self-managed learning via Weblog: Design and implementation</b>	<b>882</b>
Nantha Kumar Subramaniam	
<b>Making it work: Teaching and learning speech communication at a distance</b>	<b>895</b>
Ana Katrina T Marcial and Rhonna Marie R Verena	
<b>Utilizing e-learning for integrative learning: A value innovation at St Paul University Philippines (SPUP)</b>	<b>906</b>
Giged Tong-Battung	
<b>Generative dialogue in the distance education programmes of the University of Mumbai, India: Use of ICT and digital technologies</b>	<b>918</b>
Deshmukh Ashima and Chari Hemlata Ramaswamy	
<b>WOU mLearning: Widening access to teaching and learning in an ODL environment</b>	<b>924</b>
Sheng Hung Chung, Ean Teng Khor and Mohandas Balakrishna Menon	
<b>Skill development in business intelligence for ICT graduate programmes in ODL: A case from Sukhothai Thammathirat Open University STOU</b>	<b>939</b>
Vipa Jaroenpuntaruk	
<b>Quality assurance</b>	
<b>Quality and service determine the future of the Open University</b>	<b>946</b>
Wenjing Xu	
<b>The quality assurance standards system: Research and practice in the Open University of China</b>	<b>952</b>
Wang Lina, Guo Qingchun and Huang Chuanhui	
<b>Assessment and evaluation</b>	
<b>Developing a teacher evaluation checklist for Payame Noor University</b>	<b>959</b>
Mousavi, Malihe	
<b>Determining distance education learners' cognitive processes and levels of reflection using Web blogs</b>	<b>964</b>
Roja Rivera	
<b>A survey of current opportunities for developing an automated assessment system for C/C++ programing assignments</b>	<b>977</b>
Muhammad Salman Khan, Adnan Ahmad and Muhammad Humayoun	
<b>Evaluation of online English listening and speaking skills courses</b>	<b>989</b>
Alisa Vanijdee	
<b>A study on the observation and practical teaching session in the Certificate in Pre-school Education Programme</b>	<b>1000</b>
P L Niroshami Randima Rajapaksha	
<b>The possible factors that influence students' English writing in a distance education context</b>	<b>1010</b>
Yudi Efendi	

<b>Assessment of an ODL class based on Thailand's qualification framework</b>	<b>1020</b>
Monwipa Wongrujira	
<b>The student evaluation process: A comparison of ODL and the traditional learning mode</b>	<b>1027</b>
Aisha Ismail, Rahila Hanif and Sadaf Chouhdary	
<b>Translation portfolio: From a task-based approach to a project-based approach</b>	<b>1035</b>
Karnedi	

#### **Funding and infrastructure for research and development**

<b>Correlation analysis on the input and output of scientific research in the Open University of China</b>	<b>1050</b>
Xinxin Tao and Shunping Wei	

#### **Nurturing an institutional research culture**

<b>Social network analysis of the research relationships among faculty members of the UP Open University</b>	<b>1062</b>
Joyce Mae Manalo	
<b>Enhancing research on public management through open and distance e-learning</b>	<b>1072</b>
Juvy Lizette M Gervacio	
<b>Fostering an institutional research culture: A case study from the OUM Business School</b>	<b>1080</b>
Mohamad, W, Zakariah, Z, Afzhan Khan, M and Ruslan, R	

# The potential of mobile phones to transform teacher professional development

Christopher S Walsh

Torrens University  
Adelaide, Australia

Clare Woodward, Mike Solly and Prithvi Shrestha

The Open University  
Milton Keynes, United Kingdom

## Abstract

*Futures thinking is used by governments to consider long-term strategic approaches and develop policies and practices that are potentially resilient to future uncertainty. English in Action (EIA), arguably the world's largest English language teacher professional development (TPD) project, used futures thinking to author possible, probable and preferable future scenarios to solve the project's greatest technological challenge: how to deliver audio-visual TPD materials and hundreds of classroom audio resources to 75,000 teachers by 2017. Authoring future scenarios and engaging in possibility thinking (PT) provided us with a taxonomy of question-posing and question-responding that assisted the project team in being creative. This process informed the successful pilot testing of a mobile phone-based technology kit to deliver TPD resources within an open distance learning (ODL) platform. Taking the risk and having the foresight to trial mobile phones in remote rural areas with teachers and students led to unforeseen innovation. As a result EIA is currently using a mobile phone-based technology kit with 12,500 teachers to improve the English language proficiency of 700,000 students. As the project scales up in its third and final phase, we are using the new technology kit—known as the 'trainer in your pocket'—to foster a 'quiet revolution' in the provision of teacher professional development at scale to an additional 67,500 teachers and 10 million students.*

**Keywords:** Futures thinking, School Based Professional Development (SBPD) model, Teacher Professional Development (TPD), Mobile phones, Open distance learning (ODL)

## Introduction

Futures studies has been formalised in educational, industrial and government fields to forecast potential alternative futures to a 'probable' future to ensure a higher probability of 'success'. Futures thinking's scenario method of postulating different possible futures encourages collaboration to consider plausible alternatives to the status quo, or what is likely 'probable' in the future. The approach is fluid and sees the future as a problem to be solved, explicitly linked to actions in the present. Through the authoring and critique of probable, possible and preferable future scenarios, *English in Action* (EIA) was empowered to explore and pilot mobile phone technologies to build an alternative vision of the future that we could work for in the present. EIA's vision of the future was unequivocally premised on the implementation of a sustainable and robust large scale School Based Professional Development (SBPD) model capable of improving the English language competence of nearly 10 million Bangladeshi school children and 75,000 English teachers from 2009 to 2017.

There are few examples of international development projects using mobile phones to deliver TPD. Current research around using mobile phones for TPD tends to focus on

development of the awareness of the potential of mobile devices for learning (Schuck et al., 2013), using tablets in challenging educational contexts (Onguko, 2014) or changing teacher attitudes towards the use of mobile phones in teaching (Ekanayake and Wishart, 2014). Presently, EIA is successfully providing an innovative SBPD model that leverages the power of mobile phones to make audio-visual TPD materials and classroom resources available to 12,500 teachers and nearly 700,000 students through an ODL platform (Power et al., 2012; Shrestha, 2013; Walsh et al., 2013). Over the next three years the project will deliver this TPD through the SBPD model to an additional 67,500 teachers and nearly 10 million students.

### **English in Action (EIA)**

The importance of using information and communication technologies (ICTs) to learn English and to improve the social and economic prospects of all Bangladeshis—particularly those living in poverty—is a Bangladesh government priority. As a result, English in Action (EIA), a nine-year (2008-2017) English language teaching education program striving to improve the communicative English language skills of 25 million Bangladeshis was launched in 2008. The project is dedicated to changing English language learning by making it more student-centred, thereby potentially changing lives in the future because students will be able to communicate in English at levels enabling them to participate more fully in economic and social opportunities. The collaborative project<sup>1</sup> is funded by UKaid from the Department for International Development (DfID) and works closely with the Government of Bangladesh's Ministry of Primary and Mass Education (MoPME) and the Ministry of Education (MoE).



*Figure 1: English in Action's (EIA) logo and slogan*

#### *EIA's School Based Professional Development (SBPD) model*

EIA's School Based Professional Development (SBPD) model is an innovative form of TPD that assists teachers in learning and applying new English language teaching practices in the classrooms, schools and communities where they work. Through supported school-based ODL supported by a diversity of mediated authentic videos (MAVs) (Woodward et al 2014.) and audio classroom resources accessible on teachers' mobile phones, or the 'trainer in your pocket' (Walsh et al., 2013), the classroom becomes the nexus of learning (Walsh and Power, 2011). EIA's SBPD model stands out because it is an efficacious mobile learning solution for the field of international development that does not leave teachers on their own to make sense of ODL materials and TPD resources. Teachers learn how to access and use EIA's resources while receiving support from a teacher-partner within their school, a community of teacher colleagues from their upazilas (sub-districts) and through bi-monthly project cluster meetings across 16 months. This bespoke program assists teachers in developing, supporting and sustaining new

<sup>1</sup> For more information on EIA's partners see <http://www.eiabd.com/eia/index.php/abouts/project-partners>

communicative and student-centred pedagogic practices while simultaneously improving their own English language proficiency.

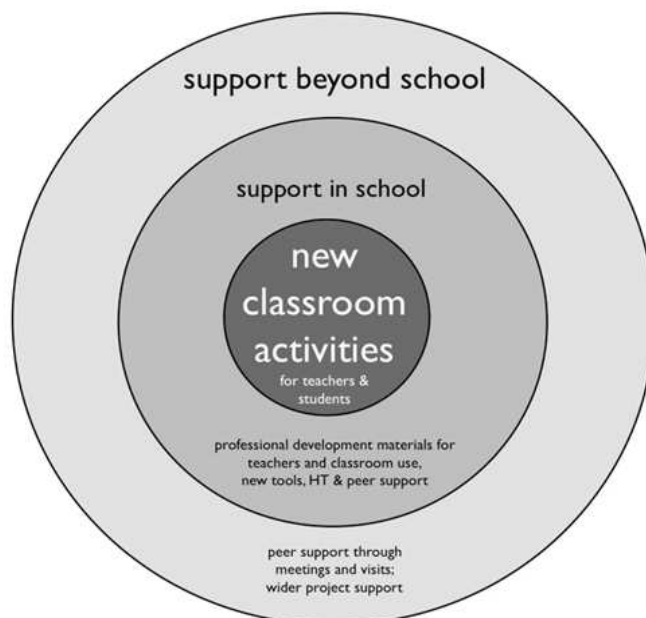


Figure 2: EIA's SBPD model (Walsh and Power, 2011)

Participation in new classroom activities is at the heart of teachers' TPD with EIA's SBPD model. Teachers are able to view, review and tryout new teaching practices exemplified by peer teachers who have themselves been participants in the project. There are two additional layers of support helping teachers in carrying out these new activities: 'support in school'; and 'beyond the school'. 'Support in school' includes an extensive collection of audio resources for primary students, directly aligned with Bangladesh's national English textbook *English for Today* books 1 – 5 (NCTB, 2013). In total there are currently 452 audio lessons for the primary classroom. There are 190 audio resources for secondary classroom which include audio recordings of many stories, dialogues, passages and poems from *English for Today* books 6-10. Additional support in school is provided by the head teachers (HT) and through peer support as two teachers from each selected school attends the 16 month cycle of EIA's SBPD. 'Support beyond the school' includes peer support, cluster meetings and wider project support including school visits, knowledge sharing and a FaceBook page<sup>2</sup>.

#### *EIA's developmental research*

EIA's developmental research was carried out with 700 teachers from government schools across 21 of Bangladesh's upazilas (2008–2011). Two thirds of these teachers worked in primary schools and one-third in secondary. Approximately 80% of all EIA schools were in rural areas with limited or no access to electricity. The developmental research helped the project explore the use of mobile technologies or eLearning for English teachers' TPD and the delivery of audio resources for classroom use (Walsh, 2011).

EIA's development research (2009-2010) provided extensive audio and visual resources to primary and secondary English teachers through a technology kit with either

<sup>2</sup> <https://www.facebook.com/EnglishInActionBangladesh>



the Apple iPod Nano (for primary teachers) or iPod Touch (for secondary teachers), both with portable rechargeable speakers. The iPods were chosen because the project believed the teachers would find the use of the Apple MP3 players relatively easy. Although iPods were more expensive than other devices available at the time, they were chosen because they had the functionalities the project believed necessary to provide teacher TPD through an ODL platform supported by EIA's SBPD model. These crucial resources, played on portable rechargeable speakers, were also chosen because they were thought to have the best possible chance of improving the communicative English proficiencies of both students and teachers.

### *Challenges*

Although the pilot phase was successful in terms of the iPods used for teachers' TPD, there were considerable challenges reported. Teachers experienced difficulty trying out and incorporating the new student-centred pedagogy demonstrated in the TPD resources, even though these were also introduced in cluster meetings. A significant technological challenge was that many teachers found it extremely difficult to charge both the iPod and portable speaker—in addition to their own mobile phones—due to the intermittent availability of electricity across Bangladesh. But the most significant technological challenge the project encountered was the high cost of the iPod Nano and Touch. These Mp3 players are too expensive to provide to 12,500 teachers in the current upscaling phase (2012-2015) and to an additional 67,500 teachers by 2017.

### **Thinking differently about the future**

Mindful of the success of the developmental research EIA knew that its SBPD model that leveraged the powered and flexibility MP3 players within an ODL platform to deliver TPD was viable and responded to the realities of Bangladesh. More importantly the research confirmed the viability of such an approach at scale with tens of thousands of teachers. The project's initial success was a catalyst that pushed us to creatively think and act 'outside of the box' to collaboratively overcome our technological and pedagogical challenges. Futures thinking's (Bell, 1997; Sardar, 1999; Slaughter, 2005) scenario method alongside foresight exercises (Cascio, 2009) and possibility thinking (Craft, 2001) guided EIA researchers in Dhaka in authoring scenarios for 'possible' and 'preferable' futures over a 'probable' future. This assisted us in solving EIA's technological challenge within the project's budget constraints (Monodol and Walsh, 2011).

Using futures thinking alongside possibility thinking (PT) encouraged us to ask 'what if' and 'as if' questions, "refusing to be stumped by circumstances but being imaginative in order to find a way around a problem" (Craft, 2000, p. 3). By engaging in possibility thinking we drew on our "little 'c' creativity" or what Craft (2001) refers to as our ability to cope with change in the 21<sup>st</sup> century. Our possibility thinking was powerful and helped us to think differently about the future—and to foster our creativity—to find a way to overcome our technological challenge within the project's budget. We individually asked 'what if' questions that were open to different possibilities that we could develop further:

- 'What if we can't find MP3 players that have screens to view the TPD resources at cost?'
- 'What can we do with the mobile phones teachers already have?'
- 'What if teachers can access the internet on their own mobile phones in 2014? Or 2017?' and

- ‘What if smart phones with enough storage to hold EIA’s resources were common across Bangladesh by 2017?’

Then we came together to engage in the process of collaboratively sharing our questions and problem-posing and problem-finding to engage in divergent and convergent thinking. To answer our ‘what if’ questions, we scanned the world for multiple perspectives, past and present, from researchers, teachers, electronic vendors and individuals. These diverse perspectives, essentially factors or drivers of what *might* happen or come to be in Bangladesh, helped us explore how our ‘what if’ questions could be answered to address the challenges we were confronted with.

### *Authoring future scenarios*

The collaborative authoring of scenarios—resulting from our possibility thinking—encouraged knowledge exchange and the development of a deeper understanding of the central issues and factors inherent in the technological challenge EIA faced. We authored three future scenarios to help guide the development of a new technology kit pilot study to choose the best possible kit to deliver EIA’s TPD resources to 12,500 teachers through 2015. Below we present our probable and preferable future scenarios. We thought deeply about what actions we would need to achieve in the present, to bring about our preferable future and avoid the probable future. This stance allowed us to reinforce what EIA was already doing well and build on the project’s success in delivering TPD.

#### *The probable future*

In Bangladesh, particularly from a government perspective (A21 & Digital Bangladesh) there is an assumption that ICT will benefit everyone, especially teachers and students. People have greater access to mobile phones and other ICT devices. Access to ICT is more ubiquitous, but not everyone has access. Those living in rural areas still struggle to access the Internet and there is not always a nearby reliable source of energy. While more individuals have access to ICT, they are still struggling with ICT literacy, meaning they don’t necessarily have the ICT skills to access and use productively all that is on offer. There is still a ‘digital divide’ in the ways in which society chooses to make technology accessible and usable to the members of society. There are many hopes pinned on this relationship being constructively arranged, but it has not been entirely realised. There are easily accessible OERs that can be accessed on mobile phones to help teachers both improve their English language skills and learn to teach in more communicative ways, but the uptake is not as quick as expected even though many individuals believe learning English will improve their social and economic opportunities.

#### *The preferable future*

Bangladeshi schools, through networked teachers, online teacher training programs and affordable/accessible network ubiquity have gained a reputation for being able to deliver English language learning tailored to individual needs. The development of learning networks advanced, no longer subject to time and place constraints. Individualized networks emerged as communities collaboratively redefined the work of schools to better serve local needs. Networks of teachers, learners, parents and professionals responded to a changing society to meet the needs of the expanding internationalized knowledge economy. Pupils leave primary school with high levels of English language proficiency while many secondary pupils emerge bilingual. Mobile phone ownership in urban and rural areas has reached saturation. Many individuals’ own mobile phones, with powerful processors, abundant memory, larger screens, and open operating systems, are used for learning and accessing greater social and economic opportunities.

### Low-cost mobile phone pilot study

EIA was conceptualised to intentionally address issues of scale, embedding and quality for the present and future across rural and urban contexts. Budget constraints of 6000 Bangladeshi Taka (BDT) per teacher (£60) mandated that EIA construct multiple kits to field test and pilot for the current upscaling phase (2012-2015), while also thinking post 2015 when there will much less funding available for the approximately 67,500 teachers to whom EIA will still be required to provide a robust program of TPD. Drawing on our preferable future scenario and the result of our possibility thinking, we chose 2 low-cost alphanumeric mobile phones with 4GB micro SD cards and portable rechargeable speakers and an SD card and portable rechargeable speakers to pilot as three separate kits from March to September (2011) in two rural upazilas. The results of the mobile phone based technology kit were extremely successful with pilot study teachers overwhelmingly reporting satisfaction and success using the kits with their students. This resulted in EIA assembling a new technology kit that was distributed to 12,500 teachers (January - June 2014) across Bangladesh. The kit (Figure 2) consists of the Nokia C1-01 (£35) mobile phone, a portable rechargeable Lane amplifier/speaker (£25) and all of EIA's TPD materials and classroom audio resources on 4 GB micro SD cards (£2). The kit has affectionately become known as the 'trainer in your pocket'



Figure 3: EIA's mobile-phone based technology kit known as "the trainer in your pocket"

### EIA's 'trainer in your pocket'

Following the success of the pilot studies, all of EIA's TPD materials were revised for use with the new mobile phone-based 'trainer in your pocket'. We illustrate how the 'trainer in your pocket' is used in two examples of ODL. The first explicitly illustrates how teachers are presented with TPD resources, in the form of mediated authentic videos (MAVs). The second outlines EIA's bespoke English for Specific Purposes (ESP) program, *English Learning for Teachers* (EL4T) which aims to increase teachers' communicative English language proficiency and teaching practices by providing ESP instruction directly related to the national textbook..

#### *Teacher TPD delivered through ODL on low-cost mobile phones*

Each primary and secondary teacher received the new technology kit and an EIA produced Teacher Guide. The teacher TPD materials are centred on the MAVs and supported by the

print Teachers' Guide. The TPD materials are divided into 8 modules and each emphasises the four skills of listening, speaking, reading and writing. The MAVs are authentic classroom based TPD films illustrating examples of student-centred English teaching lessons that emphasise a communicative approach using the government textbook

Each of the MAVs start with a female narrator, who is the 'expert' voice introducing each TPD focus of the module. What makes EIA's MAV resources for TPD innovative is that the narrator first sets a 'viewing task' prior to the teachers watching the video and then poses reflective questions for them to consider and respond to *after* practising similar techniques in their own classroom. The expert voice of the narrator enables EIA to move away from the default cascade model of large-scale professional development where information is passed down from the original author, through a range of master trainers, eventually reaching the teacher in an often 'diluted' form (Robbins and Latchem, 2003).



Figure 4: EIA's narrator presenting the TPD through a MAV

To understand how the 'trainer in your pocket works' for teacher TPD we provide an example from the EIA produced *Secondary Teacher Guide: Secondary Teaching and Learning* from Module 8 entitled 'Looking back and moving forwards'. For Module 8, there are 3 video clips, 4 audio files and a 'Teachers Talking' audio file for extended reflection on practice. In the first film, the narrator introduces the module (Figure 3):

*Hello and welcome to Module 8 – Looking back and moving forwards. This is the final module of the English in Action programme. We begin with Part 1 (SM8-V1) – the communicative classroom. As you have read in the module 8 introduction, you are going to watch video clips of a lesson for Class 7, Unit 4, Lesson 10.*

*In the first clip, you are going to watch the first part of the lesson. As you watch the video clip, think about these questions:*

- *What is the focus of the first part of the lesson?*
- *What do the students practise?*

*Now watch the clip and take notes.*

This is followed by a film of the classroom with the students reviewing vocabulary from an earlier lesson and the teacher introducing new vocabulary that they will encounter (Figures 4 and 5) in their texts. The teacher then writes 3 questions on the board and asks the students to read a story and look for the answers to these questions. Afterwards

students switch papers and correct their partner's answers. There are over 60 female students in the classroom.

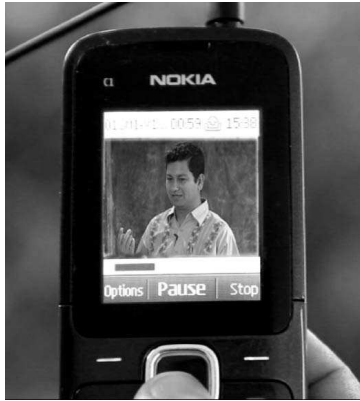


Figure 5: *communicative English teaching*



Figure 6: *Students engaging in communicative English*

Afterwards the narrator comes back on and says:

*So what is the focus of this first part of the lesson?*

*The first part of the lesson involves a short reading passage – the first part of a story. The students read the story but before they do, the teacher prepares them for the story by reminding them of the previous lesson, and then introducing them to some words from the story. This is a pre-reading activity. As the students practise these words, they are already thinking about the story and what will happen, and this helps them to understand the story when they read it.*

*The students then answer the questions on the board. Do you remember what the teacher said, back in Module 2, when asking students to read a passage and answer questions based on it? "Remember, you don't have to read every word." The students here are NOT reading every word; they are scanning the text in order to find the information to answer the 3 questions. The teacher then asks them to switch papers with their partner – why does he do that? Well, think back to Module 5. It helps students to become more independent and to think about their learning and keeps them engaged in the class and in their learning. Did you also notice how the teacher asks students from around the class and always praises the students?*

*Let's continue watching – why does the teacher ask the students to write their own question about the story?*

The video then continues with students writing their own questions and asking their partners to answer them before the teacher invites selected students to ask their questions to the whole class.

The video narrator then comes back on and summarises what the teachers have viewed and focuses on the idea of ‘recycling language’ and the communicative English language learning activities the students engaged in:

*After reading the story, the students each write a question about it. Here they are recycling language, and they are also checking that they understood the key points of the story. They ask each other questions in pairs, and as a whole class. This also helps the teacher to see if the students have understood the passage.*

*So now for the second question – what do the students practise?*

*[PAUSE]*

*The students practise reading of course, but they also practise listening – they listen to the teacher who is speaking in English, and they listen to the other students. They also practise a little speaking and writing – they each write a question about the story, and they answer each other's questions.*

*Although this lesson focuses on reading, the teacher uses English as much as possible with his students, and tries to make the lesson as communicative as possible.*

*Now go to Module 8 ‘Try in the Classroom 1’ in the Teacher Guide where there is a task for you to try so that you can make your own classroom more communicative.*

#### *English Language for Teachers (EL4T)*

English language teachers in Government and non-Government schools in Bangladesh are non-native speakers of English. As a result, their communicative English language proficiency is low. Thus, many English teachers use the Grammar Translation Method of teaching. This method does not focus on teaching students how to communicate in English (Prator and Celce-Murcia, 1979); rather teachers ‘translate’ the text using Bangla focusing on meaning, rather than communication. In order to address this challenge, EIA developed an innovative ODL course called *English Language for Teachers (EL4T)* for both primary and secondary English language teachers (Shrestha, 2012).

*EL4T* is an ODL self-study English for Specific Purposes (ESP) course, with audio files accessible through micro SD cards on teachers’ mobile phones that are used alongside a print guide. *EL4T* was designed to provide teachers with access to the ESP demands of Bangladesh’s national textbook series, *English for Today*. *EL4T* does this by explicitly focusing on speaking and listening skills that take into account functional English language, structures and vocabulary of direct relevance to communicative classroom teaching. *EL4T* contains two sets of bilingual (Bangla and English) audio and print-based materials for to use at their own pace. There is a total of 60 hours of ODL activities for both primary and secondary teachers.

## Fostering a ‘quiet revolution’ in the provision of teacher professional development

The previous examples illustrate how EIA is using the ‘trainer in your pocket’ for large-scale teacher professional development within a SBPD model and for self-study within an ODL platform. Paramount to EIA’s TPD is that teachers can revisit the videos to view successful student-centred teaching practices in classrooms similar to their own. Afterwards, they can compare and reflect upon EIA’s TPD resources alongside their uptake of student centred communicative English language teaching practices. We collaboratively problematised the ‘probable’ future on offer because we deeply care about the future of all children, particularly children in Bangladesh. Drawing on our ‘little-c creativity’ we thought differently about how to leverage the power of mobile phones to co-create more sustainable educative futures with the Bangladeshi teachers and students we work with.

We argue the use of the ‘trainer in your pocket’ within the SBPD model—the result of collaborative futures thinking—is working to foster a ‘quiet revolution’ (Chappell et al. 2011, 150) in the provision of TPD at scale in Bangladesh. This is because researchers within EIA engaged in possibility thinking to co-construct possible futures to challenge current assumptions about the technological and pedagogical future of Bangladesh. We did this to provoke other pathways than what was to likely happen in the ‘probable’ future.

We believe our approach is ‘changing learning and changing lives’ because over time, we have witnessed noticeable changes in the creative community of teachers and students we have been lucky enough to work with. For example, Bangladeshi teachers are using their own ‘little c creativity’ to maximise the learning potential of the ‘trainer in your pocket’. As the project scales up in its final phase, we are certain all stakeholders can engage in the collaborative, collective and co-creative endeavour needed—that assumes commitment to excellence and engaged involvement (Chappell, Walsh and Craft, 2013)—to institutionalise all of EIA’s TPD resources, making them open educational resources (OERs). Thus, with the rapid changes in technology, teachers across Bangladesh will have access to the pedagogical resources they need to challenge the status quo as they themselves engage in possibility thinking to transition from *what is* to *what might be* through ‘what if?’ and ‘as if’ thinking. (Craft, 2012, p. 182).

## References

- Bell, W. (1997). *Foundations of Futures Studies*. New Brunswick, NJ, Transaction Publishers.
- Cascio, J. (2009). *Futures Thinking: The Basics*. Available at <http://www.fastcompany.com/blog/jamais-cascio/open-future/futures-thinking-basics> Accessed on 01 July 2010.
- Chappell, K., L. Rolfe, A. Craft, and V. Jobbins. 2011. *Close encounters: Dance partners for creativity*. Stoke-on-Trent: Trentham Books.
- Craft, A. (2001). Little c creativity. In A. Craft, B. Jeffrey, and M. Leibling (Eds) *Creativity in education*, London: Continuum, 45–61.
- Craft, A. (2012). Childhood in a digital age: creative challenges for educational futures, *London Review of Education*, 10(2), 173–190.
- Craft, A., Chappell, K. and Walsh, C.S. (2013). *Deliverable 2.1.1 C2Learn Learning Design for Creative Emotional Reasoning (CER)*. C2Learn: Creative Emotional Computational Tools Fostering Co-Creativity in Learning Processes. Accessed from: [http://www.c2learn.eu/sites/default/files/C2Learn\\_D2\\_2\\_2\\_Learning\\_Design\\_for\\_CER.pdf](http://www.c2learn.eu/sites/default/files/C2Learn_D2_2_2_Learning_Design_for_CER.pdf)
- Ekanayake, S. Y. and Wishart, J. (2014), Integrating mobile phones into teaching and learning: A case study of teacher training through professional development workshops. *British Journal of Educational Technology*

- Md. Monodol, S. and Walsh, C. (2011). Leveraging mobile phones to make 'Vision 2021' a reality. Proceedings from eAsia 2011 Realizing Digital Nation Conference, Dhaka Bangladesh December 1-3, 2011.
- National Curriculum & Textbook Board. (2003). English for Today. Dhaka, Bangladesh: National Curriculum and Textbook Board, Ministry of Education.
- Onguko, B. (2014). JiFUNzeni: A Blended Learning Approach for Sustainable Teachers' Professional Development. *Electronic Journal Of E-Learning*, 12(1), 77-88
- Power, T., Shaheen, R., Solly, M., Woodward, C., & Burton, S. (2012). English in action: school based teacher development in Bangladesh. *Curriculum Journal*, 23(4), 503-529
- Prator, C.H. and Celce-Murcia, M. 1979. An outline of language teaching approaches. In Celce-Murcia, M. and McIntosh, L. (Ed.), *Teaching English as a Second or Foreign Language*. New York: Newbury House.
- Robbins, B. and Latchem, C. (2003). Open and distance teacher education: Use and models, In B. Robinson and C Latchem (Eds.) *Teacher education through open and distance learning* (Vol. 3). Psychology Press.
- Sardar, S. (1999). *Rescuing All Our Futures*. WestportCT, Greenwood Press.
- Schuck, S., Aubusson, P., Kearney, M., & Burden, K. (2013). Mobilising teacher education: a study of a professional learning community. *Teacher Development*, 17(1), 1-18.
- Shrestha, P. (2012). Teacher professional development using mobile technologies in a large-scale project: lessons learned from Bangladesh. *International Journal of Computer-Assisted Language Learning and Teaching*, 2, 34-49.
- Shrestha, P. (2013). English Language for Teachers (EL4T): a course for EFL teachers. In: TESOL 2013 International Convention: Harmonising ESP practice in EFL contexts through curricular innovation , 20 - 23 March 2013, Dallas, Texas.
- Walsh, C.S. (2011). E-learning in Bangladesh: the 'trainer in your pocket'. In: IADIS International Conference e-Learning 2011, a part of the IADIS Multi Conference on Computer Science and Information Systems 2011, 20-23 July 2011, Rome, Italy.
- Walsh, C. and Power, T. (2011). Rethinking development and the use of mobile technologies: Lessons from Bangladesh. In: *Gloabal Learn Asia Pacific 2011*, 28 Apr-01 May, 2011.
- Walsh, C. S., Power, T., Khatoon, M., Biswas, S. K., Paul, A. K., Sarkar, B. C., & Griffiths, M. (2013). The 'trainer in your pocket': Mobile phones within a teacher continuing professional development program in Bangladesh. *Professional Development in Education*, 39(2), 186-200.
- Woodward, C., Griffiths, M., and Solly, M. (2014). English in Action: A new approach to TPD through the use of mediated video, peer support and low cost mobile phones: in ed. David Hayes, *Innovations in the Continuing Professional Development (TPD) of English Language Teachers*, British Council.